Before the

Federal Communications Commission

Washington, D.C. 20554

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In the Matter of))
AMENDMENT OF PART 97 OF THE)
COMMISSION'S RULES GOVERNING THE) RM
AMATEUR RADIO SERVICE TO)
IMPLEMENT CHANGES TO ARTICLE 25)
OF THE INTERNATIONAL RADIO)
REGULATIONS ADOPTED AT THE 2003)
WORLD RADIOCOMMUNICATION)
CONFERENCE, TO ENHANCE THE)
AMATEUR RADIO SERVICE AND TO FULFILL)
THE COMMISSION'S OBJECTIVE OF)
STREAMLINING THE AMATEUR RADIO)
SERVICE AS SET FORTH IN)
WT DOCKET 98-143.)

To: The Chief, Wireless Telecommunications Bureau

PETITION FOR RULE MAKING

The Radio Amateur Foundation, an unincorporated grassroots organization comprised of concerned, licensed radio amateurs without pecuniary interest in the Amateur Radio Service, hereby with all respect, requests the Commission to issue at the earliest date possible a Notice of Proposed Rulemaking, proposing changes herein in the rules governing the Amateur Radio Service. The rule changes proposed in this Petition would upgrade the

15. of Copies rec'd Of 4 ISLABODE B 04-2/ Service by implementing changes to the International Radio Regulations adopted at the 2003 World Radiocommunication

Conference (WRC-03) with regard to qualifications for the basic, entry-level license in the jurisdictional areas governed by the Federal Communications Commission. It provides a progressive licensing framework and bandplan that enhances the existing

Amateur Radio Service, while still respecting the basic, sensible traditions that have made the Amateur Service strong, and prepares those involved for the worst of all conceivable national communications emergencies. As well, it provides an elegant mechanism that allows the Commission to meet the objectives it set forth in WT Docket 98-143: to streamline and enhance the license structure and application process. Finally, it provides for the creation, adoption and integration of new and existing digital technologies into the mainstream of the Service.

Instead of creating a new, entry-level license class, the Radio Amateur Foundation proposes to modify the popular and highly successful Technician Class license to allow restricted high-frequency telephony, data, image and CW privileges, thereby remaining the defacto entry point into the Service. This Petition also proposes that the Element 1 Morse telegraphy requirement be retained for both the General and Amateur Extra Class license, that all current Advanced Class licenses are to be

upgraded to Amateur Extra Class and that all current Novice Class licenses are to be upgraded to Technician Class.

The Radio Amateur Foundation states its petition as follows:

I. Background and Introduction

Since its inception, the licensing requirements for the Amateur Radio Service in the United States have been revised numerous times. The most recent revisions were in the year 2000, when the Commission ruled that all licensees in the Amateur Service with operating privileges below 30 MHz were to demonstrate a basic proficiency in Morse telegraphy at five (5) words per minute (WPM). This was in keeping with the international requirement that all amateurs operating below 30 MHz were to demonstrate a basic knowledge of Morse telegraphy. Since, in July 2003, the World Radiocommunication Conference (WRC-03) revised Article 25 of the international communications regulations governing the Amateur Service, removing the international requirement for demonstration of Morse radiotelegraphy proficiency. It was decided at WRC-03 that it would be left up to each national authority to develop its own licensing requirements with regard to such proficiency. The Article that pertains to this requirement now reads:

25.5 - 3.1) Administrations shall determine whether or not a person seeking a license to operate an amateur station shall demonstrate the ability to send and receive texts in Morse code signals.

Modifications to Article 25 regarding technical criteria were also made:

- 25.6 2) Administrations shall verify the operational and technical qualifications of any person wishing to operate an amateur station.
- 2. In Docket 98-143, the Commission tasked itself with "streamlining" the Amateur Service. During this time, it reduced the number of license classes in the Amateur Service from six to three, reduced the number of required telegraphy elements from three to one and reduced the number of written examination elements from five to three. The Commission's intent was to simplify the licensing structure and corresponding processes. However, this was specifically considered by the Commission to be a short-term 'fix', and that such matters as operating privileges, and the upgrade incentive offered by those privileges would be dealt with at a later date. However, in its effort to streamline the Amateur Service, the Commission has been left with the task of maintaining 'legacy' or grandfathered classes, specifically the Novice and Advanced Class licenses. And though no new licenses of these classes have been issued since, existing licenses have been maintained without a reduction of privileges

though no new Novice or Advanced Class licenses have been issued, much of Part 97 of the Commission's rules remain 'frozen in time' in order to accommodate those licensees. As a result, the Commission has not been able to fully recognize the administrative benefit sought in Docket 98-143.

3. In view of recent modifications to Article 25 at the 2003 World Radio Conference, and in light of the obvious need for Amateur Service restructuring (and the Commission's invitation to the Amateur community to fully participate in the process), the Radio Amateur Foundation believes that it is time for the restructuring process to be completed. The Radio Amateur Foundation understands the need for the Commission to fully reap the benefits of the streamlining process it began with WT Docket 98-143. Any such restructuring must address the near-term future (up to 10 years) of the service, the needs of both prospective radio amateurs and the concerns of currently licensed radio amateurs pertaining to licensee integrity, the potential impact of restructuring on existing operating conditions and the preparedness of the service for the worst conceivable communications emergency. We argue that modification of the existing and very successful Technician Class license to include restricted HF privileges meets both the objectives of the

Commission, as well as the objectives of current and future radio amateurs, and can serve as a successful and proven entry point into the Amateur Service. We also submit that modification of existing Novice Class licenses to Technician Class, as well as modification of existing Advanced Class licenses to Amateur Extra also meets all of the above listed objectives with little, if any negative impact on the Amateur Service. The Radio Amateur Foundation believes that providing for a code-free entry level license with restricted high frequency access and full access above 50 MHz by modifying the existing Technician Class license is the most sensible route for both the Commission and the Amateur Service. However, the Radio Amateur Foundation asserts that beyond this, there is no need to make modifications to the licensing requirements for either the current General or Amateur Extra Class license. In their current form, both of these classes are highly successful, and provide ample incentive for radio amateurs to engage in a course of motivated self-training in order to obtain these privileges. With any modification to these classes, as some have suggested, the Commission creates a high risk of corrupting the integrity of the Amateur Service, and disenfranchising those very radio amateurs who have long contributed to the service.

II. The Technician License - Building on a Proven Entry-Point into the Amateur Service

Since the creation of the 'Codeless' Technician Class license in 1991, more people have entered the Amateur Service than ever before. The Commission itself has noted this success. with satisfaction, and ascertains that the Technician Class license should be the main entry-level point into the Amateur However, as others have maintained, as the only entrylevel license, it segregates licensees to a local geographic scope in terms of average communications distances and does not provide an opportunity for an adequate 'sampling' of the 'amateur experience' in terms of the worldwide communication capabilities that the Amateur Service is noted for in the high-frequency spectrum. Without the opportunity for actual hands-on experience below 30 MHz, many licensees at this level are not properly motivated to take on the task of self-training and improvement needed to 'upgrade' to the General Class license. The Radio Amateur Foundation proposes with this Petition that restricted privileges in the high-frequency spectrum of the Amateur Service be granted to the Technician Class license, as set forth in the section VII of this petition, without any reduction in privileges above 50 MHz. It would grant restricted power narrowband data and Morse telegraphy privileges on segments of the 80, 40, 15 and 10 meter high-frequency amateur bands, as well as voice and image

privileges with restricted power on the 10 and 15 meter high-frequency amateur bands. It is also believed that there is a substantial benefit in providing restricted privileges, limited by frequency spectrum and transmitter output power of 100 watts P.E.P. on relatively unused portions of the 160 meter medium-frequency amateur band from 1900-2000 kHz for the entry-class license. This would provide a "nighttime" band for Technician Class licensees, and would afford the opportunity for experimentation and experience with operating conditions very different than those experienced on the high-frequency amateur bands. The recommended privilege modifications are outlined in section VII of this petition.

- 5. It is felt that voice and image privileges on the 40 and 80 meter amateur bands for the entry-level Technician class license is NOT in the best interest of the Amateur Service for two very logical reasons:
 - The current overcrowding of these frequencies. The 40 meter phone segment is 'bursting at the seams' with activity on a 24 hour a day basis, and competition with international broadcasters at night only worsens the situation. At night, the 80 meter phone segment is, at best crowded with stations who are trying desperately to avoid interfering with each other. During contest weekends, these bands suddenly become

so saturated that ill-will between amateurs is commonplace. Overcrowding on these frequencies has been stated as one of the reasons for the ARRL's 'Refarming Petition' for the Novice bands (Petition for Rulemaking, RM-10413). 'Opening the gate' and suddenly allowing access to these frequencies by multitudes of inexperienced amateurs will, at best result in an acute communications nightmare, ill-will between amateurs and most likely result in an onslaught of complaints filed with the Commission's Enforcement Bureau.

- Incentive for Advancement. Along with the 20 meter amateur band, both 40 and 80 meter phone segments are seen as 'prime' space, and access to these segments is one of the fundamental incentives for the radio amateur to upgrade to a higher class license. These segments should be 'carrots' that the amateur community uses as incentives to motivate amateurs to take on the task of self-training, and upgrading to the General Class license.
- 6. The recent modification of Article 25 at WRC-03 affords the Commission the opportunity to finally complete the process of making the Technician Class license a true entry-point into the Amateur Service, and to streamline it's own internal processes with the intent it set forth in Docket 98-143.

- 7. Modification of the privileges to include HF and MF access for Technicians will require an updating of the Technician Class license examination question pool to reflect a basic understanding of the new mediums involved. Basic propagation, international radio law, basic radio theory, operating procedure, digital modes and antenna theory, which are currently part of the Technician Class exam should be broadened to include specific questions relating to operating below 30 MHz.
- 8. It should be noted however, that even with the opportunity afforded in this petition, many Technician Class licensees are quite content with the local communications capabilities afforded them with the privileges associated with this class, and will not see the benefit of tasking themselves with 'upgrading' to the General Class license. This has been observed since the inception of the original Technician Class license. There is nothing wrong with this. Those very amateurs have been accepted into the community and have contributed greatly to the Service. They find their own value within the terms of their current privileges and do not desire what this proposed enhancement has to offer.
- 9. It has been argued by some, including the ARRL, that the volume and scope of knowledge required for the Technician Licensee is "too broad", and that it is a deterrent for many who

wish to enter the amateur service through this license class. The Radio Amateur Foundation disagrees with this statement, and uses the success of the Technician License since 1991 as its primary proof and evidence. In the history of the Amateur Service, never has such a license attracted so many newcomers. It is believed that the scope of material required is in no way immaterial to the privileges granted by the license, nor is it a deterrent to entry into the service. It is also believed that creation of a new entry-level 'Novice' license, and dismissal of the Technician Class license is counter to the Commission's objective of streamlining and simplifying the Amateur Service as set forth in Docket 98-143. It is felt that the Commission will also agree with these observations, as it will undoubtedly be hesitant in disposing of the most successful entry-class license in U.S. Amateur Service history.

10. The Radio Amateur Foundation asserts that the proven success of the Technician Class license, with modifications to include restricted access below 30 MHz would provide a full-spectrum entry point into the Amateur Service, within a similar spirit as the old Novice Class license. Our organization respectfully requests that the Commission make the modifications illustrated in this section as soon as possible. As for current Technician Class licensees with credit for successfully passing

the five words-per-minute telegraphy exam, it is recommended that they be allowed to maintain lifetime telegraphy credit. This will encourage those individuals to pursue a path toward a higher-class license.

III. The General Class and Amateur Extra Class Licenses. Don't Fix what isn't Broken.

The General Class license accounts for more than 20 percent of all licensed radio amateurs in the United States. some time in most every active amateur's life, obtaining a General Class license becomes a goal. It is a celebrated rite of passage in American ham culture. Passing of the General Class exam reflects a licensee's intermediate understanding of general radio theory and practice at all amateur frequencies, safety, electronics, antenna theory and an intermediate comprehension of international telecommunications law. From this foundation, the radio amateur is prepared to experience amateur radio at its fullest, with a full set of privileges that span from 1.8 MHz to the shortest of light wavelengths. Radio amateurs reaching this level feel a sense of pride and achievement, part of which is gained from the personal struggle and quest for knowledge that every ham endures to reach this point. The General Class license, in effect, works well the way it is currently structured, and in not in need of any type of modification.

12. The Amateur Extra Class license reflects the pinnacle of achievement for the radio amateur in the United States, and according to the Commission's public data, accounts for 14.6 percent of all licensed amateurs in this country. reflects an advanced knowledge, usually gained through hands-on experience over a wide variety of communications-related disciplines. The main distinguishing characteristic in these radio amateurs is a high interest in communications and substantial motivation to perfect their own personal art. who meet these requirements are an elite group who deserve the full set of privileges that are granted to radio amateurs in this country. Radio amateurs who reach this lofty goal genuinely possess a sense of what Abraham Maslow, a legendary behavioral psychologist from the early 20th century referred to in the 'Hierarchy of Needs' as 'self-actualization'; a sense of wellbeing and enlightenment for having achieved the highest of one's goals through work, struggle, understanding, wisdom and experience. Very few other circumstances in a human being's life can provide this sense of achievement, and the struggle to reach this point is a large part of the foundation of this very human and very rare phenomenon. The Radio Amateur Foundation acknowledges this as one of the great moments in our amateur lives, and respectfully requests that the Commission make no modifications whatsoever to the Amateur Extra Class license.

Passing of the current General Class and Amateur Extra Class examination also reflects a basic proficiency in the most simple and essential forms of radiocommunication: telegraphy. Even though commercial, maritime and other pecuniary-based services have walked away from this basic form of communication in favor of other more economical methods. telegraphy has been gaining favor in HF amateur circles in the Several HF-based amateur radio contests based using past decade. this mode have seen a substantial increase in participation during the past 10 years - both in this country, and internationally. Also, in contrast to the argument made in its recent (yet unnumbered) petition for rulemaking to the Commission, the ARRL cites in a non-scientific web-based survey dated March 2003 that nearly 68 percent of respondents used CW on a regular basis, and 44 percent use it more than any other mode. It is also interesting to note that at that time, more than 30 percent of all licensed amateurs were so-called 'no-code' Technicians - around the same number of respondents that said that they 'never used CW'. Telegraphy continues to provide reliable communications using the most basic of equipment between radio amateurs over great distances, during the harshest of ionospheric conditions and where most other methods of communication fail or could not otherwise be utilized. In short. it provides the radio amateur with a powerful tool and a skill

that can always be relied upon, and is seen as a cornerstone in the active radio amateur's wide-ranging toolset.

- 14. Many have made the argument that because the maritime and commercial services are 'pulling the plug' on radiotelegraphy, it is a reason to do so in the amateur service. It should be noted that it is illogical to even compare the two services, because respective needs are very different. Maritime and commercial entities are mostly concerned with being able to move massive amounts of information reliably, and in a short period of time. The regulations governing those services also correspondingly allow very high power and other necessities required to meet the objectives of it's licensees. Amateurs on the other hand usually engage in very low information transfer and rarely ever have the need to move massive amounts of information reliably. If an amateur has such a need, he or she usually turns to an appropriate commercial service, in the same manner as those outside of the amateur service.
- 15. Non-amateur services are concerned primarily with pecuniary interest, either directly or indirectly. Moving to other modes of communication are primarily motivated and necessitated by optimizing those commercial interests and nothing else. They may choose to drop telegraphy in favor of 'modern' methods because it is too expensive to keep trained operators on

staff, because there is a need for instant and private communications or because of a perceived lower liability profile in the event of a mishap (such as a maritime distress situation). Using the argument that the elimination of telegraphy in services which have entirely different motives, motives which are explicitly prohibited in the Amateur Service by Part 97.3(4) of the Commission's regulations, is in no way a valid argument for those detractors who wish to use it as a case for the elimination of the telegraphy requirement in this service. As stated in Part 97.3 of the Commission's regulations governing the Amateur Service:

(4) Amateur Service. A radiocommunication service for the purpose of self-training, intercommunication and technical investigations carried out by amateurs, that is, duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest.

Commercial interest is explicitly prohibited in the Amateur Service. Therefore, the decisions made by those with commercial interests in other services with entirely different objectives cannot be used as an argument to justify similiar action in a non-commercial service. To remove the telegraphy requirement based on the actions of those in other services would be a dangerous precedent, and could fundamentally change the nature of the Amateur Service. Amateur radio exists for its own sake, and should not be impacted by the decisions made

"amateur" radio, and should remain pure, as stated in FCC 94.3(4).

The Commission has stated that Morse proficiency alone does not indicate whether an individual will be a successful radio amateur. This argument is tantamount to the statement that "knowledge of American History is not a good indicator of how well a person will perform in American society." While this statement may be true to some extent, there is no doubt that a citizen, native or naturalized, who knows the history of his nation will be in a better position to fully understand, utilize and appreciate it. Similarly, it is agreed that knowledge of Morse telegraphy alone does not imply that one whom is proficient in it would make a 'better' radio amateur than one whom isn't. Many radio amateurs in the Technician Class ranks have more than proven themselves worthy hams, perfecting their technique, contributing to their communities and advancing the art of amateur radio on the frequencies above 50 MHz. However, it is commonly accepted that an amateur whom is proficient in radiotelegraphy has a distinct advantage over other amateurs who are not likewise proficient in this simple communications method, and that the same ideal Technician Class licensee illustrated above would be a more capable radio amateur if he or she was proficient in

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telegraphy methods, especially when using the frequencies below 30 MHz.

- only mode allowed to amateurs that can be used to transcend language barriers, allowing our community to become 'radio room diplomats', aiding tremendously in our quest for "continuation and extension of the amateur's unique ability to enhance international goodwill" (FCC Part 97.1e). While some will argue that digital methods can be used to the same effect, this would limit such communications to those who could afford the complex equipment required, effectively removing lower-income amateurs using simple equipment from this enlightening activity.
- and instant worldwide communications, that radiotelegraphy is 'outdated' and 'outmoded', and solely because of the telegraphy requirement, the 'best and brightest' are prevented from entering the service as they once did. They point to an emotionally perceived 'loss' of amateurs on the bands, when in fact, there are more licensed radio amateurs than ever before. This perceived 'loss' can be attributed to a variety of technological and cultural shifts, including:

- an increase in communications options that the average ham has available, including those which are deemed commercial.
- a decrease in the amount of time relegated to 'hobbies', such as amateur radio, in our contemporary society.
- an drastic increase in the number of options competing for our dwindling leisure time.
- a societal shift toward an 'instant gratification' mindset, which runs counter to the very purpose and most highly regarded traditions of the Amateur Service, an institution built upon individual self-training, selfimprovement, experimentation and personal satisfaction; a service which is anything but 'instant gratification' oriented.
- brightest' from entering the Amateur Service. The 'best and brightest' will have little trouble mastering telegraphy in short order, or any other existing examination requirement for a license grant in the Amateur Service, but only if they are so motivated. There are many in the Amateur Service who once did not see the need for a telegraphy requirement, but were motivated enough to step up to the challenge, and now fully appreciate why the requirement was in place to begin with. Lowering licensing requirements does not invite participation from the 'best and brightest' as some argue. It only serves to lower the motivation for those who thrive on challenge, the very individuals who are so needed in the Amateur Service.

Those individuals understand that learning and wisdom come from accepting an honest challenge. If lower requirements encouraged participation, local community colleges would be overflowing with high school valedictorians and National Merit Scholars, while universities such as Stanford and MIT would have to go begging for students.

- 19. The Radio Amateur Foundation asserts that the individual struggle for skill development, mastery and proficiency leaves in its wake a sense of genuine achievement. This sense of achievement which so-called 'traditional' radio amateurs have gained over the decades is what defines the sense of respect and protectiveness that each worthy amateur has for the Amateur Service. It is an integral part of the radio amateur culture, and this sense of respect and duty can only be attained through the process of mastery. Individuals who have never set out on this self-imposed quest for mastery and attainment have no frame of reference for what many of those active in the Amateur Service hold in such high regard.
- 20. Unfortunately, it is mostly those individuals outside of the service, along with traditional amateurs who are responding emotionally to a perceived 'loss' of activity on the high frequencies, and those who stand to gain

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financially (either implicitly or otherwise), who have cried the loudest for the dismissal of the telegraphy requirement in the Amateur Service. Basically, ignorance, panic and greed are unwitting collaborators in an alliance to wholesale the values and culture of a service which has a tradition of proficiency, knowledge, pride and self-regulation.

21. Finally, it should be noted that by removing the Morse radiotelegraphy requirements from the General Class and Amateur Extra Class licenses, the Commission would be creating the groundwork for a socially divisive caste system within the Amateur Service - the 'no-codes' versus the 'know-codes'. To some degree, this is already a fact in some circles. Amateur radio, by its very nature, is a very social pursuit. However, by removing telegraphy from the requirements of the General Class and Amateur Extra Class licenses as petitioned by some in the community, the Commission is potentially embarking upon a mission that is virtually guaranteed to become a very expensive enforcement nightmare.

The Worst of All Conceivable National Emergencies

- 22. Part 97.1 of the Commission's regulations governing amateur radio states:
 - (a) Recognition and enhancement of the value of the amateur service to the public as a voluntary

noncommercial communication service, particularly with respect to providing emergency communications.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

Part 97.401 of the Commission's regulations governing amateur radio also states:

- (a) When normal communication systems are overloaded, damaged or disrupted because a disaster has occurred, or is likely to occur, in an area where the amateur service is regulated by the FCC, an amateur station may make transmissions necessary to meet essential communication needs and facilitate relief actions.
- regulations that are the raison d'etre of the Amateur Service in the eyes of the public, those trained operators mentioned in 97.1 must be prepared to provide communications in the worst of all conceivable scenarios a nuclear attack upon the United States. While this might seem much less likely in a post-Cold War era, the events transpiring on September 11, 2001 and subsequently, the rationale for invading the nations of Iraq and Afghanistan leave one to believe that the scenario is even more of a possibility than before. This threat is compounded further by North Korea's pursuit of nuclear weapons and long-range missiles. It is common knowledge in technical circles that in the event of even a limited nuclear attack, modern terrestrial, satellite and emergency backup communications networks will be, for the most

part rendered useless by the electromagnetic pulse (EMP) event generated by the nuclear explosion(s). As well, the nation's fragile energy infrastructure is quite susceptible to the same event. The only electronic equipment to survive such an event will be of the older larger-lead tube-type equipment, and modern equipment specifically isolated and protected from electromagnetic pulse events. It is also suspected that the ionosphere will be 'noisy' from radiation and charged artifacts projected through it by such a series of explosions, with phase delays that would wreak havoc on standard voice and data communications.¹

amateurs proficient in radiotelegraphy will be called into service to provide the most important of all communication tasks. Public and private interests alike ~ and in particular, those that ceased the use of radiotelegraphy, will find themselves depending on the very method of communication that was deemed 'archaic' and slow. While it is strongly believed (and hoped) that this particular scenario is highly unlikely, by unnecessarily disposing of the radiotelegraphy requirement for the General Class and Amateur Extra Class licenses, the Commission increases the risk of a total national communications

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^{&#}x27; The Effects of Nuclear Weapons, 1978, U.S. Department of Defense, pp. 461-540

failure in such an event by eventually eliminating this basic of all skills from its resident amateur population; the very people who are the last hope in such a situation.

- 25. It should also be noted that most recently, the military services in many western nations have returned to teaching Morse telegraphy to communications personnel. The U.S. Special Forces and the British SAS have always required a knowledge of Morse telegraphy within their units. It should also be noted that the former eastern-bloc nations have never ceased the use of telegraphy, and have stated recently that even with the changes in ITU Article 25, they will not drop it as a requirement for an amateur license. They understand that during the worst of all conditions, radiotelegraphy can be relied on.
- Radiocommunication Conference provides the latitude for each individual administration to determine whether or not a radio amateur should have proficiency in radiotelegraphy. On the grounds of national security alone, it should be quite obvious from the above illustration that maintaining a pool of trained radio operators is in the best interest of the Commission, the Amateur Radio Service and the United States. An amended Article 25 provides the option to do so. However, implied in the Article 25 option is the responsibility that each administration has in

maintaining the high-level of integrity within the service by providing an intuitive path for those few who are so motivated to become a member of the amateur community; not to provide a cheap alternative to other, more appropriate communications services. The Commission must utilize the amended Article 25 with caution, restraint and wisdom. It is an option, because a decision that may work in the best interests of one administration does not necessarily mean that it will be effective in another. It should be used to better the Amateur Service, not degrade it. On these grounds, the Radio Amateur Foundation strongly and respectfully requests that no modification to the current requirements for the General Class and Amateur Extra Class license by altered in any way whatsoever.